

SUB A1 7

1. A semiconductor device, comprising:  
a semiconductor chip; and  
protective resin covering a sidewall of the  
semiconductor chip and having a surface formed so as to be flush  
with an inactive surface of the semiconductor chip which is a  
surface on the opposite side of an active surface of the  
semiconductor chip.
2. The semiconductor device according to claim 1,  
further comprising  
an external connecting terminal electrically connected  
to the active surface of the semiconductor chip and having an  
exposed portion exposed to the outside of the protective resin.
3. The semiconductor device according to claim 1,  
further comprising  
a board to which the semiconductor chip is joined.
4. The semiconductor device according to claim 3,  
wherein  
the semiconductor chip is joined to the board in a state  
where the active surface is opposite to the board.
5. The semiconductor device according to claim 3,  
wherein  
the board is a wiring board having a wiring pattern formed  
therein.
6. The semiconductor device according to claim 3,

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SUB A2  
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a board; and

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wherein

9. The semiconductor device according to claim 7,

the board is another semiconductor chip, to constitute a chip-on-chip structure as a whole.

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a grinding step for simultaneously grinding or polishing an inactive surface which is a surface on the opposite side of an active surface of the semiconductor chip and the protective

resin covering the sidewall of the semiconductor chip.

11. The method according to claim 10, further comprising a chip joining step for joining the semiconductor chip to the board before the resin sealing step.

5 12. The method according to claim 11, wherein in the chip joining step, the semiconductor chip is joined to the board in a state where its active surface is opposite to the board.

13. The method according to claim 11, wherein the  
10 board is a lead frame,

the semiconductor chip is joined to the lead frame in a state where its inactive surface is opposite to the lead frame in the chip joining step,

a connecting step for connecting, with a bonding wire,  
15 a predetermined portion of the lead frame and a predetermined portion of an active surface of the semiconductor chip is further carried out before the resin sealing step,

the active surface of the semiconductor chip and the bonding wire are together sealed with resin in the resin sealing  
20 step, and

a portion, positioned on the side of the inactive surface, of the lead frame is ground prior to the grinding of the inactive surface of the semiconductor chip in the grinding step.

25 14. The method according to claim 11, wherein a

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plurality of semiconductor chips are joined to the board in the chip joining step,

the plurality of semiconductor chips on the board are sealed with resin in the resin sealing step,

5 the plurality of semiconductor chips are concurrently subjected to the grinding step, and

a cutting step for cutting out individual pieces of semiconductor devices each including the predetermined number of semiconductor chips is carried out after the grinding step.

10 15. The method according to claim 14, wherein the cutting step includes the step of simultaneously cutting the protective resin and the board.

16. A method of producing a semiconductor device, comprising:

15 a chip joining step for joining a semiconductor chip to a board in a state where an active surface of the semiconductor chip is opposite to the board; and

a grinding step for grinding or polishing an inactive surface which is a surface on the opposite side of the active  
20 surface of the semiconductor chip.

17. The method according to claim 16, wherein a plurality of semiconductor chips are joined to the board in the chip joining step,

the plurality of semiconductor chips are concurrently  
25 subjected to the grinding step, and

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a cutting step for cutting out individual pieces of semiconductor devices each including the predetermined number of semiconductor chips by cutting the board is further carried out after the grinding step.

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